

On the following periodic table, label the different blocks associated with electron configuration:

	I.A																	IIIA																		
1	H 1																	He 2																		
2	Li 3	Be 4																	B 5	C 6	N 7	O 8	F 9	Ne 10												
3	Na 11	Mg 12	Al 13	Si 14	P 15	S 16	Cl 17	Ar 18											K 19	Ca 20	Sc 21	Ti 22	V 23	Cr 24	Mn 25	Fe 26	Co 27	Ni 28	Cu 29	Zn 30	Ga 31	Ge 32	As 33	Se 34	Br 35	Kr 36
4	K 19	Ca 20	Sc 21	Ti 22	V 23	Cr 24	Mn 25	Fe 26	Co 27	Ni 28	Cu 29	Zn 30	Ga 31	Ge 32	As 33	Se 34	Br 35	Kr 36	Rb 37	Sr 38	Y 39	Zr 40	Nb 41	Mo 42	Tc 43	Ru 44	Rh 45	Pd 46	Ag 47	Cd 48	In 49	Sn 50	Sb 51	Te 52	I 53	Xe 54
5	Rb 37	Sr 38	Y 39	Zr 40	Nb 41	Mo 42	Tc 43	Ru 44	Rh 45	Pd 46	Ag 47	Cd 48	In 49	Sn 50	Sb 51	Te 52	I 53	Xe 54	Cs 55	Ba 56	La 57	Hf 72	Ta 73	W 74	Re 75	Os 76	Ir 77	Pt 78	Au 79	Hg 80	Tl 81	Pb 82	Bi 83	Po 84	At 85	Rn 86
6	Cs 55	Ba 56	La 57	Hf 72	Ta 73	W 74	Re 75	Os 76	Ir 77	Pt 78	Au 79	Hg 80	Tl 81	Pb 82	Bi 83	Po 84	At 85	Rn 86	Fr 87	Ra 88	Ac 89	Rf 104	Db 105	Sg 106	Bh 107	Hs 108	Mt 109	Uun 110	Uub 111	Uut 112	Uuq 113	Uup 114	Uuh 115	Uus 116	Uuo 117	Uuu 118
7	Fr 87	Ra 88	Ac 89	Rf 104	Db 105	Sg 106	Bh 107	Hs 108	Mt 109	Uun 110	Uub 111	Uut 112	Uuq 113	Uup 114	Uuh 115	Uus 116	Uuo 117	Uuu 118																		

6	Ce 58	Pr 59	Nd 60	Pm 61	Sm 62	Eu 63	Gd 64	Tb 65	Dy 66	Ho 67	Er 68	Tm 69	Yb 70	Lu 71
7	Th 90	Pa 91	U 92	Np 93	Pu 94	Am 95	Cm 96	Bk 97	Cf 98	Es 99	Fm 100	Md 101	No 102	Lr 103

- Define valence electron:

Exemptions to Electron Configurations

- Paramagnetism versus diamagnetism

Example:

Write the noble gas configuration of Chromium.

Questions:

Write the noble gas configuration for each of the following elements:

- 1) Copper
- 2) Tungsten
- 3) Gold
- 4) Silver
- 5) Molybdenum

Electron Configuration of Ions

Example:

Write the electron configuration of Ga^{3+} .

Questions:

Write the noble gas configuration for each of the following ions and identify what element this configuration is for (i.e. which element's ground state configuration is the same as the ion's electron configuration):

- 1) Ca^{2+}
- 2) Co^{3+}
- 3) S^{2-}
- 4) Cr^{3+}
- 5) Br^-